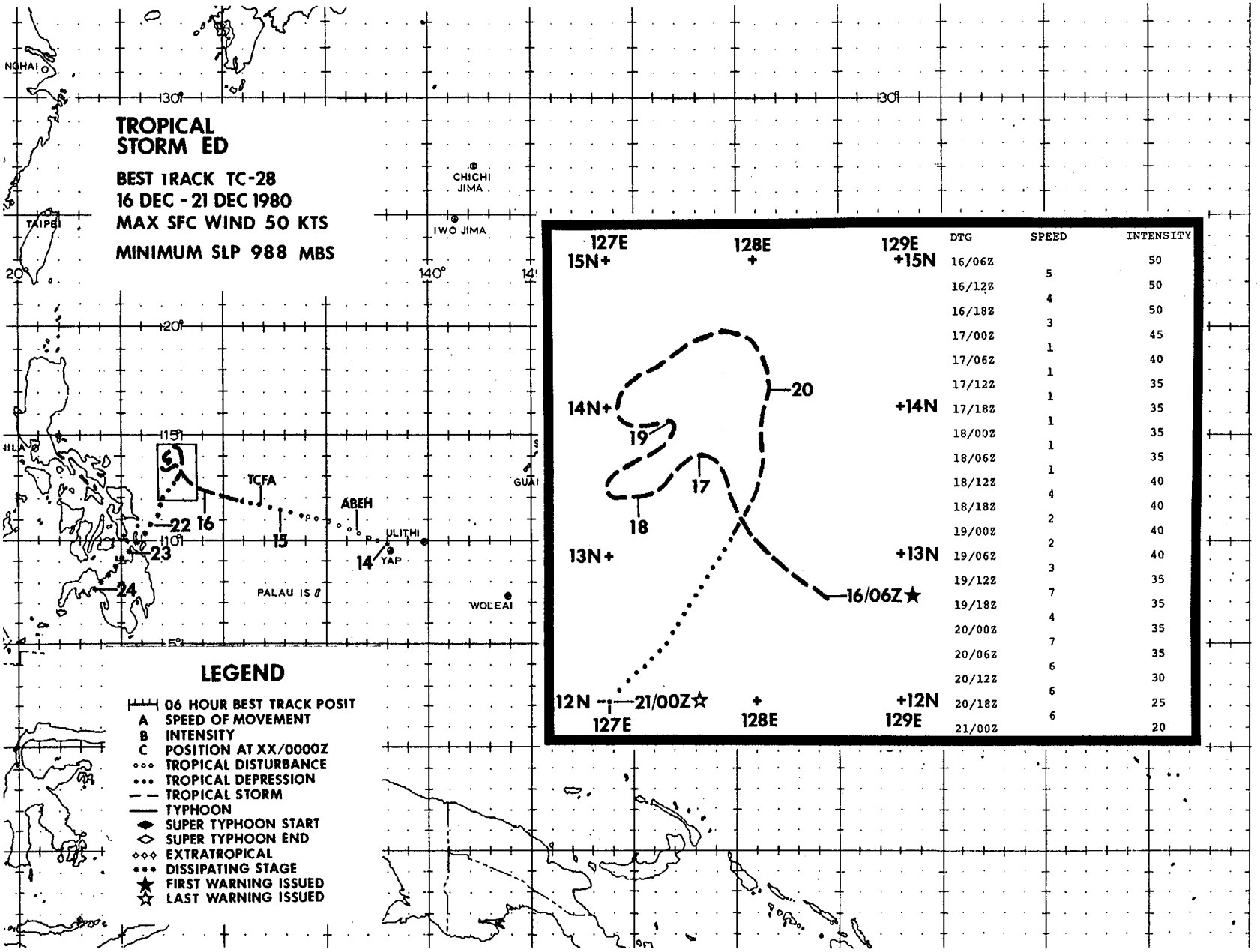
TROPICAL
STORM ED
BEST TRACK TC-28
16 DEC - 21 DEC 1980
MAX SFC WIND 50 KTS
MINIMUM SLP 988 MBS
NGHAI O
TAIPEI
CHICHI
JIMA
IWO JIMA
GUAI
ABEH
ULITHI
YAP
PALAU IS
WOLEAI
TCFA
22
16
15
23
24
14
127E
128E
129E
15N+
+15N
14N+
+14N
13N+
+13N
12N
+12N
20
19
17
18
16/06Z★
21/00Z☆
DTG
SPEED
INTENSITY
16/06Z 5 50
16/12Z 4 50
16/18Z 3 45
17/00Z 1 40
17/06Z 1 35
17/12Z 1 35
17/18Z 1 35
18/00Z 1 35
18/06Z 1 40
18/12Z 4 40
18/18Z 2 40
19/00Z 2 40
19/06Z 3 35
19/12Z 7 35
19/18Z 4 35
20/00Z 7 35
20/06Z 6 30
20/12Z 6 25
20/18Z 6 20
21/00Z
LEGEND
06 HOUR BEST TRACK POSIT
A SPEED OF MOVEMENT
B INTENSITY
C POSITION AT XX/0000Z
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM
TYPHOON
SUPER TYPHOON START
SUPER TYPHOON END
EXTRATROPICAL
DISSIPATING STAGE
FIRST WARNING ISSUED
LAST WARNING ISSUED

Tropical Storm Ed was the last significant tropical cyclone to develop in the western North Pacific in 1980. Ed was never forecast to reach typhoon strength due to the strong vertical wind shear which developed in the vicinity of the Philippine Islands during the last half of December.

Tropical Storm Ed was first observed as a disturbance near Yap on the 14th of December. The disturbance moved westward at between 12 and 15 kt (22 to 28 km/hr) as its convective activity and overall organization continued to improve. A Tropical Cyclone Formation Alert (TCFA) was issued when a reconnaissance aircraft observed a well-defined low-level circulation with a minimum sea-level pressure of 1004 mb. The first warning on Tropical Storm Ed was issued at 160000Z when 50 kt (25 m/sec) surface winds and a 991 mb pressure were reported. Maximum surface winds were consistently observed northeast of Ed in a region of enhanced pressure gradient between the cyclone's center and a strong surface ridge.

It became evident from synoptic analyses that Ed was moving into an area which was unfavorable for continued development. Figures 3-28-1 and 3-28-2 are representative of the

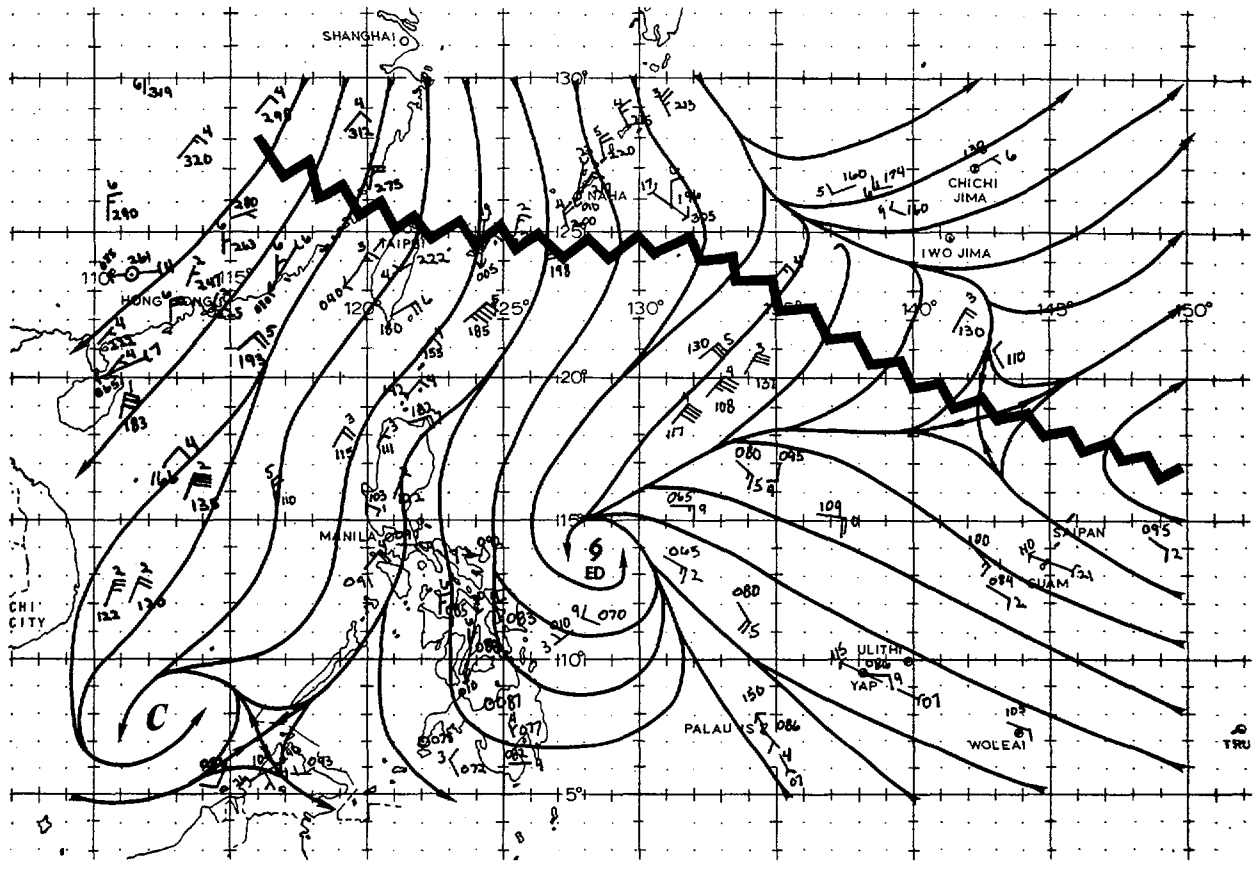

FIGURE 3-28-1. The 200000Z December 1980 surface (⟶)/gradient level (⟵) wind data and streamline analysis in the vicinity of Tropical Storm Ed. Wind speeds are in knots.

basic flow patterns which existed at the surface and 200 mb levels during most of Ed's existence. The strong surface ridge mentioned above extended from the Asian mainland into the Pacific Ocean north of Ed and maintained a strong northeasterly low-level flow in the vicinity of the Philippine Islands (Fig. 3-28-1). At the same time, strong southwesterly flow at the 200 mb level was present off the east coast of the Philippines (Fig. 3-28-2). The resultant strong vertical wind shear not only caused Ed to weaken as his convection moved off to the northeast, but it also helped to maintain a confused steering flow which induced Ed to follow an erratic course while he was northeast of Simar.

Eventually, after most of his convection had been sheared off, Ed's surface center began to track to the southwest under the influence of the strong surface ridge to the north. Dissipation as a significant tropical cyclone was completed on the 24th as the remnants of Ed moved into northern Mindanao.

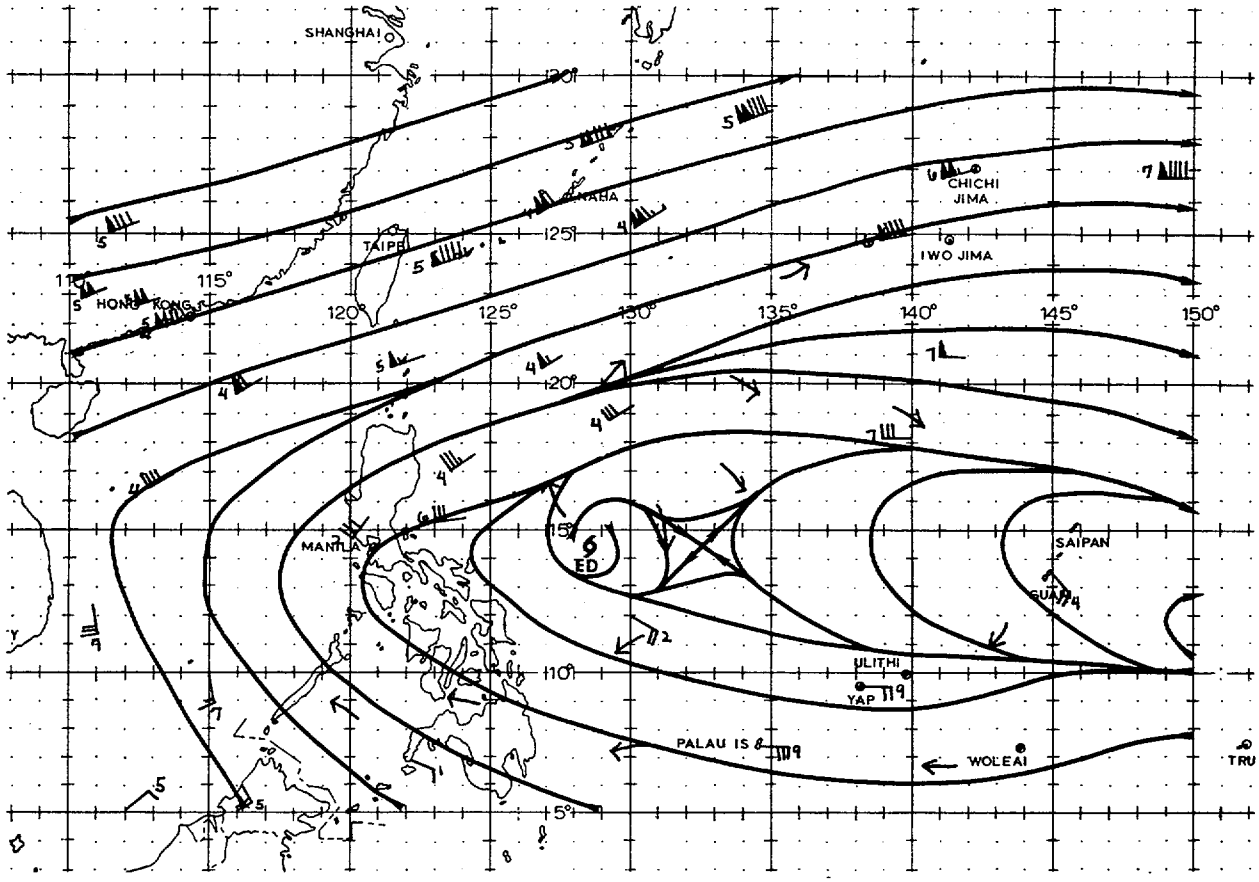

FIGURE 3-28-2. The 200000Z December 1980 200 mb streamline analysis. Wind speeds are in knots.